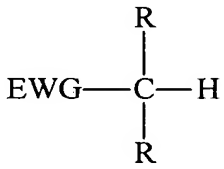
ABSTRACT

The present invention provides a process for the removal of protecting groups, i.e. deprotection, from chemically synthesized oligonucleotides. In one embodiment, the invention provides reagents suitable for use in such a process, and kits incorporating such reagents in a convenient, ready-to-use format. By use of the process and reagents of the invention, side-reactions leading to certain impurities that contaminate the synthesized oligonucleotides can be minimized.

Methods and reagents are provided for deprotection of an oligonucleotide by reacting a protected oligonucleotide with a deprotection reagent wherein the deprotection reagent comprises an active methylene compound and an amine reagent. The active methylene compound has the structure:



where substituent EWG is an electron-withdrawing group and R is hydrogen, C_1–C_{12} alkyl, C_6–C_{20} aryl, heterocycle or an electron-withdrawing group.